Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities	)	CS Docket No. 02-52
	)	
	)	

REPLY COMMENTS OF THE AMERICAN CIVIL LIBERTIES UNION

July 12, 2002

We offer these reply comments on behalf of the American Civil Liberties Union (ACLU) to urge the commission to adopt open access regulations that will allow multiple Internet Service Providers (ISPs) to offer their services and content to broadband customers. The ACLU is a non-partisan, non-profit organization, consisting of nearly 300,000 members, dedicated to protecting the liberties and freedoms guaranteed in the Constitution and laws of the United States.

Many of those who have submitted comments have argued that regulations providing for open access to cable modem service would not be practical or desirable. We believe that it is both.

To bolster this claim, we are submitting as evidence a report we commissioned from a telecommunications engineering consulting firm, Columbia Telecommunications Corporation, (CTC) that studies the cable broadband Internet and evaluates from a technological perspective the prospects for maintaining the Internet's open nature as it shifts from dialup to cable. This report finds that:

- No matter which of several cable architectures are employed, open access is technologically possible;

- Broadband cable companies could easily adopt a "public interest architecture" based on principles such as maximizing consumer choice and competition among ISPs;

- One technique for allowing multiple ISPs on cable Internet networks, which CTC calls "rebranding and resale of wholesale services," actually leaves the cable operator in control of the product. As a result, it creates only the illusion of real competition and consumer choice, and is not true open access.

We are also submitting an ACLU White Paper setting forth in more detail the reasons why we believe those whose comments opposing open access requirements are incorrect. It is entitled "No Competition: How Monopoly Control of the Broadband Internet Threatens Free Speech."

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No Competition:

How Monopoly Control of the Broadband Internet Threatens Free Speech

An ACLU White Paper

Introduction

The Internet as we have known it is going to change – the only question is how. There's a fight going on over that question, and at stake is nothing less than the Internet's potential as a medium for free expression, civic involvement and economic innovation.

Driving the change is the ongoing conversion by consumers from a dial-up Internet (based on slow modem connections over phone lines) to far faster "broadband" connections (mostly using cable modems). With dialup, Internet access is provided over a medium that provides open, equal access to all: the telephone system. But with the shift to cable, Internet access must be adapted to a medium that has been far more subject to centralized control.

The danger is that the Internet will come under private control. Core American liberties such as freedom of speech are of no value if the forums where such rights are commonly exercised are not themselves free. And the Internet is without doubt the most vital and active such forum around today – a place where citizens can publish their views to be seen by a few close friends, or spread around the world; where citizens can engage with others on thousands of bulletin boards and chat rooms on nearly any topic, create new communities of interest, or communicate anonymously about difficult topics. It is one of our top entertainment mediums. It is the nation's most comprehensive, flexible, and popular reference work. It is the closest thing ever invented to a true "free market" of ideas.

That is why the American Civil Liberties Union has a keen interest in the continued openness and vitality of the Internet as a medium for free expression. Working with the Center for Digital Democracy, we commissioned a telecommunications engineering consulting firm, Columbia Telecommunications Corporation, to study the cable broadband Internet and evaluate from a technological perspective the prospects for maintaining the Internet's open nature as it makes this shift from dialup to cable. (CTC's report is available online at http://www.aclu.org/issues/cyber/broadband_report.pdf.)

CTC has focused on cable because it is proving to be the dominant provider of broadband to residential and small business customers,[1] and current trends suggest that its dominance will only grow. Already, cable reaches almost double the number of subscribers as the primary alternative, digital subscriber lines (DSL),[2] which has been

[1] The FCC considers residential and small business high-speed Internet customers as part of the same market. As of June 2001, cable accounted for roughly 64 percent of this market, while DSL served about 32 percent. See *Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Report, (2002) (Third Report), Appendix 3, Table 3.

[2] In a report analyzing broadband deployment trends, the FCC found that as of June 2001, 5,184,141 subscribers received broadband through cable networks, while 2,693,834 did so through DSL and 1,738,366 through other services, such as fixed wireless and satellite. Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and

hampered by certain technical limitations (only customers who live close to a telephone company central office can get it) and numerous business obstacles. In addition, the cable industry's business models and regulatory framework are setting precedents for other broadband technologies. The telephone industry, for example, is undertaking a tremendous lobbying effort aimed at cable-style deregulation of DSL networks.[3]

CTC's report, "Technological Analysis of Open Access and Cable Television Systems," makes two things clear. First, it is very possible that the existence of the Internet as a free and neutral civic space could come to an end. Second, that does not have to happen.

HOW INTERNET FREEDOM IS ENDANGERED

In order to understand how it is that free expression and other liberties are endangered as the Internet shifts toward cable broadband, it is important to understand 5 points:

1. The Internet has succeeded because it is open
2. Cable networks are not open
3. Cable providers wield total control over Internet use
4. Cable broadband is not restrained by competition
5. Cable broadband has not been restrained by regulation

Let us examine each of these points in turn, and then look at what needs to be done about the problem.

1. The Internet has succeeded because it is open

The Internet was able to explode into American life almost overnight because there has been no centralized control over how the network is used, and the Internet serves as a neutral, nondiscriminatory "pipe" that automatically carries data from origin to destination without prejudice or interference. No company, individual, or institution has the power to decide what applications are allowed to run by users at the ends of the network, what kinds of data can be moved through the network, or whose data moves faster. This structure, referred to as "end-to-end" networking, allows intelligence, decision-making, and innovation to take place on the edges of the network, while the

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Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996 – Third Report, CC Docket 98-146, p. 98 (2002).

[3] In late February 2002, the Internet Freedom and Broadband Deployment Act (the Tauzin-Dingell bill) passed the House of Representatives. This legislation would eliminate open access requirements on the Baby Bells that require them to allow competing ISPs to use their DSL networks. Several similar bills have been introduced in the Senate; it remains to be seen if they will receive support. Also in February, the FCC tentatively concluded that broadband services delivered over DSL are "information services," opening the door to similar deregulation of DSL access requirements. (See Federal Communications Commission, *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket No. 02-33, February 15, 2002) These events highlight a worrisome trend towards establishing the unregulated cable model as a universal regulatory policy for broadband that would extend across technologies.

network itself remains neutral. It has allowed innovation to remain in the hands of end-users, allowing anyone with an idea and some technical expertise to create a new application and distribute it to anyone else on the Internet.

The end-to-end process is a result of the Internet's technical design at many levels, including the fact that the dominant means of accessing the network has always been dialup. Using the dial-up system, consumers access the Internet by connecting directly to their Internet Service Providers (ISPs) through the telephone network. This was well suited to a model of free-market competition, because every individual Internet surfer could choose which ISP to use, and then connect directly to that company. If they didn't like their ISP, they could switch providers and then connect to the new provider simply by dialing a different phone number. And it was very easy to go into business as an ISP. This spurred development of an extremely healthy and competitive ISP marketplace; there are now more than 7,000 ISPs in the U.S.[4]

The open rules of the telephone system have helped keep the Internet open as well, but nondiscriminatory access on the phone system was not inevitable – it was the result of a regulatory framework consciously designed to promote the principles of openness and nondiscrimination. That framework is called "common carriage."

Common carriage policy requires that a network owner – in this case, a telephone company – not discriminate against information by halting, slowing, or otherwise tampering with the transfer of any data. The purpose of common carriage is to prevent a network owner from leveraging its control over the pipeline for communication to gain power or control over the actual information, products and services that flow through it. This is not a new concept; for well over a century it has been applied in ways that have been central to the economic development of our nation, including canal systems, public highways, and the telegraph. And common carriage has been applied to the telephone system since the early 20th century, requiring it to serve all users in an equitable and nondiscriminatory fashion.

2. Cable networks are not open

Unlike phone companies, cable television providers do not have to provide nondiscriminatory access to their TV subscribers, because cable TV is not subject to the common carrier regulatory regime. As a result, the content that cable TV companies deliver is largely under their control. Television content providers are forced to negotiate with cable owners to secure one of the limited number of spots in the channel line-up, while consumers are presented with little ability to customize the content and services they purchase, and find themselves subject to the opportunistic pricing whims of their provider.

The Internet is fundamentally different from cable television, however. While cable television has traditionally been characterized by centralized control over a limited

[4] American ISP Association, http://www.americanisps.org/1031/index.jsp, visited 02/26/02.

number of channels, Internet services offer access to a limitless network of distributed information sources, requiring no centralized control over content or services. When cable companies provide Internet access, they are performing a new, entirely different role that is much closer to what the phone companies do. Just as the phone companies provide a conduit or "pipe" into the global telephone network, cable broadband providers provide a pipe into the global computer network we call the Internet.

Yet so far, the FCC is treating cable Internet just like cable television. They have refused to treat cable broadband as a common carrier and abandoned the agency's role in making sure our vital public networks remain open.[5]

In addition to this regulatory treatment, cable networks also lack the Internet's open and nondiscriminatory design on the technical level. As CTC explains in its report, when customers access the Internet using a cable modem, they are wired directly into the cable provider's system as part of one big local area network (LAN) – much the same way that computers in an office are connected together. And like an office LAN, everyone shares the same network and everyone follows the same path online – from user modem, to cable provider, to the Internet – all under the control of a single, centralized administrator (the cable provider).[6] The cable industry is trying to extend its old business model to the broadband Internet, leaving consumers with little choice about where to get their high-speed access – it is their cable provider or no one at all.

In the dial-up world, then, the telephone infrastructure with its common carrier regulatory framework protected the openness of the Internet. But if the proprietary nature of cable television is extended to cable broadband, the Internet will be stripped of the end-to-end characteristics that make it uniquely valuable to citizens, innovators and businesses as a democratic and competitive resource.

3. Cable providers wield total control over Internet use

CTC's report shows that a company providing Internet access over a cable system has many opportunities for interfering with online activities, often in ways that are invisible to their customers. In fact, much like the administrator of an office LAN, they have the potential for an all-seeing, all-controlling power over the activities of customers on their network. Cable providers are under no obligation to remain a neutral pipe for content over an end-to-end Internet – and have many incentives for interfering with that pipe:

- **Basic control of the service.** Providers of course have control over the fundamentals of a customer's Internet connection. For example, they can restrict

[5] When AOL and Time-Warner merged recently, the new company was ordered by the Federal Trade Commission to offer access to several ISPs. However, as explained in section 4, this requirement does not amount to true open access.

[6] As CTC explains, users do not follow the same path online on systems employing policy-based routing (PBR), but it is not known if any cable systems are implementing PBR, and in any case the operator exercises no less control over the network under PBR.

the number of computers that a customer connects to the cable modem through a home network. They can control the overall speed and reliability of a customer's online experience. And they can set the price for various levels of high-speed access.

- **Control over applications.** Providers can block their customers from using particular applications, such as video conferencing, Internet telephony, and virtual private networks (which can connect far-flung individuals through a secure "private" network). Even if they don't block such uses outright, they can require that customers use the company's own, proprietary software for carrying them out (software that can in turn have any number of limitations and controls built in). In short, they can insert themselves between one end of the Internet pipe and the other by blocking particular uses of that pipe. As cable providers' dominance grows, so will their power to interfere with the innovation and experimentation that an end-to-end Internet encourages.
- **Control over access to content.** Even more frightening is the growing ability of cable providers to interfere with content. As CTC explains, providers can "slow or block access to certain sites on the Internet, such as those without financial arrangements with the cable company's ISP, or those with content considered objectionable for political or competitive reasons," even while they "speed transmission to an affiliated site (or a site that has paid the operator for the privilege of special treatment)." That is like the phone company being allowed to own restaurants and then provide good service and clear signals to customers who call Domino's and frequent busy signals, disconnects and static for those calling Pizza Hut. Outrageous? It would be entirely possible if the telephone system wasn't regulated under the common carrier framework. At a time when many cable providers have assembled far-flung business empires on the premise that cross-promotion and other "synergies" will yield big profits, they will come under strong pressure to do the equivalent. And what can be done in the commercial context could be done just as easily to political content.
- **Ability to force-feed content.** Cable providers can also use their monopoly power to force-feed content to customers by requiring them to access the Internet through a particular home page containing material selected by the cable company. AOL has done something similar with its "welcome screen," which has become a powerful communications tool for the company, allowing it to plug its affiliated companies and reap advertising revenue through an often blurry mix of news stories and paid promotions.[7]
- **Ability to violate privacy.** Finally, a cable provider's absolute control over its network gives it the technical capacity to record everything its customers do online, down to the smallest mouse click. In February 2002, the nation's third-largest cable company, Comcast, without notification to its customers, began to track their Web browsing.[8] Although the practice became public and was quickly ended under a cloud of bad publicity, personal information such as Web browsing

[7] See Brendan Koerner, "Click Here For Britney: AOL Muscles Its Way Into Online Journalism," *Washington Monthly*, July 13, 2001. Online at http://www.tompaine.com/feature.cfm?ID=4428.

[8] Stefanie Olsen and Rachel Konrad, "Comcast privacy move its latest woe," CNET, Feb. 13, 2002. Online at http://news.com.com/2100-1023-836937.html.

habits is increasingly being viewed by corporations as a valuable resource to be mined and sold for marketing purposes. In addition, the efforts of media companies to keep their songs, movies, and other content from being shared over the Internet is creating strong pressures to monitor consumer's online activities. Such incentives for violating privacy aren't going to go away, and the increasing power of cable providers (combined with the lack of privacy protections in the law) makes future surveillance attempts like Comcast's inevitable.

In short, cable broadband providers have both the financial incentive and the technological capability to interfere with the Internet as a free and neutral medium for the exchange of information. Americans cannot expect major corporations – who are under intense pressure from Wall Street to meet earnings expectations every quarter, and in any case see their primary duty as serving the interests of their shareholders, not protecting free speech – to refrain from such interference on their own. So the important question becomes: what will hold them back?

4. Cable broadband has not been restrained by competition

The preferred check on corporate power in America is free-market competition. But as we have seen, cable is not competitive because it has not been subject to regulations requiring open access to the network by competitive ISPs (and to a lesser extent because of its centralized, LAN-like architecture).[9]

The main restraint on cable broadband providers today is still competition from old-fashioned dialup access. But over time, most analysts expect citizens to continue gravitating toward broadband as they tire of the slow pace of the Internet delivered over phone lines. In addition, as more citizens do get broadband, Web sites will add fatter and fatter content to their pages, making dialup even more intolerable and creating a snowball effect. When the dominance of cable providers becomes secure, the Internet's days as a free and open medium could be numbered unless the cable providers' ability and incentive to interfere with the Internet is counterbalanced in some way.

Opponents of cable regulation deny that cable companies are in danger of becoming unchecked monopolies. They make several arguments, none of which hold up under scrutiny:

- **Competition from other facilities**. Regulatory opponents argue that even though cable access itself offers consumers no choice of ISP, those consumers will always be able to go online through other forms of access. This has been labeled "facilities-based competition." The problem is that the other main form of high-

[9] The domination of cable TV by local monopolies that leverage control over centralized network infrastructure to create a bottleneck for content and services is partially due to the high fixed costs of network deployment and limited space in public rights-of-way, which inhibit cable network overbuilding. As a result, without a regulatory framework requiring open access to the network by competitive ISPs, it is not surprising that competition has failed to develop in the cable TV industry.

speed access, DSL, has not developed into an effective alternative to cable.[10] To begin with, many can never get DSL, because it is only available to those who live close to a telephone company central office, which usually means those who live in dense, urban neighborhoods.[11] In addition, there have been widespread complaints and even lawsuits over the difficulty of getting DSL service installed; some analysts have concluded that for business reasons the local phone companies do not even *want* DSL to succeed.[12] It is unlikely that DSL networks will provide consumers with adequate choice for high-speed Internet access services any time soon.

- **Competition through open access**. Opponents of regulation have also pointed to the fact that some cable Internet providers have begun to offer access to multiple ISPs over their system.[13] But as CTC's report makes clear, there are several ways to provide "open access," and they are not created equal. The model of open access that many large cable operators are proposing is what CTC calls "rebranding and resale of wholesale services." Under rebranding, the cable operator still controls all the technical components of the Internet service, from cable modem to Internet backbone. As a result, customers get the same service that the cable operator offers – good, bad, or indifferent – and with the same potential limitations on content or services. The "competing" ISPs have no control over the quality or nature of the service provided.[14] Rebranding provides an empty shell of real competition that does little to bring about the good effects that competition is supposed to serve. It does not create pressure on providers to innovate, improve their services, or avoid steps that will anger their customers (including violating their privacy rights or their expectation of content-neutral Internet service).
- **Technical barriers**. In another attempt to deflect regulation, the cable industry has claimed that open access requirements are not technically possible. In its report, CTC conclusively shows that such claims are false. Cable networks that are capable of offering cable Internet service are also capable of supporting some form of open access. Technology is simply not the limiting factor when it comes to how Internet access is provided over a cable network.

The effect on consumers of the lack of competition in cable broadband can be seen in Tacoma, Washington, which CTC studied for its report. Once competition arrived there

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[10] Other potential forms of high-speed Internet access include satellite and fixed-wireless systems. However, these technologies are still young and have yet to prove that they can scale to provide widespread connectivity. While both may well play a role in future communications systems, it is likely that they will play a supplementary role to cable and DSL networks in delivering high-bandwidth content to the home and office, rather than acting as full-fledged competitors.

[11] The further away from a central officer a customer lives, the slower his or her connection speed will be. Service is not likely to be available at all to those who live further than 15,000 feet away.

[12] See Robert X. Cringley, "Sorry, Wrong Number: Why Your Phone Company Hates DSL," PBS.Org, http://www.pbs.org/cringely/pulpit/pulpit20010222.html, visited 05/01/02.

[13] The best example of ISP choice on cable today, AOL-Time Warner, supports just three nonaffiliated ISPs – and only because it was forced to offer a choice of ISPs by the Federal Trade Commission as a condition of its merger with AOL.

[14] Rebranders can compete in offering proprietary content, such as chat rooms and home pages. But not in the core function of an ISP: providing a pipe with which to access the Internet.

through the creation of a second, overbuilt network called Tacoma Click!, a local regulator told CTC, the number of consumer complaints about the incumbent AT&T cable system dropped significantly, and it was forced to improve its services in order to compete. AT&T's network in Tacoma is now significantly more advanced than most cable broadband systems, offering a number of new services such as video-on-demand and Internet telephony. Competition has also yielded lower prices for high-speed Internet access services in Tacoma, unlike in most markets where local monopolies can charge whatever they desire.[15]

Competition in Tacoma, however, came about through overbuilding – the construction of a costly and duplicative cable network on top of the existing system, which is rare and is likely to remain so; most Americans will continue to be served by only one cable provider.[16] And cable industry consolidation will in all likelihood continue to increase the power of each cable company. According to data provided by the National Cable and Telecommunications Association,[17] the top five cable companies in the United States control 75% of the market; if the proposed merger between Comcast and AT&T is approved, only four companies will control that 75%, with approximately 35% of all cable in the US controlled by Comcast alone. Letting access to the Internet fall under the control of this tiny cluster of large companies would not be good for the Internet, for the free flow of ideas and information, or for the greater good of our democratic society.

5. Cable broadband is not restrained by regulation

Because the technological architecture and regulatory structure of cable, unlike the dial-up Internet, does not lend itself to free-market competition, consumer and free-speech advocates and many others have called for regulators to mandate "open access" of cable – to rewrite the rules so customers can choose among multiple, competing ISPs over their cable broadband connections. That way, citizens who are angered by a cable operator's restrictions on content (or high fees and insulting customer service, for that matter) will have alternatives to impotently railing at their provider or giving up high-speed internet access altogether.

Those regulatory attempts have been fiercely opposed by the cable providers and, so far, spurned by the Federal Communications Commission (FCC), the federal agency that

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[15] AT&T charges $42.95 per month for high-speed Internet access, whereas the three ISPs operating on the Click! Network charge between $26.95 and $29.95 per month. See Hadley, Jane. "Cheaper Cable? Go to Tacoma; in Seattle, Rates Will Jump." Seattle Post-Intelligencer. May 29, 2002. Available at http://seattlepi.nwsource.com/local/72341_modem29.shtml

[16] In any case, even overbuilding gives consumers only two competitors to choose from, which does not make for healthy and vigorous competition. As anti-trust experts have long noted, when an industry comes under the control of just a few players, competition is nearly always reduced, because even without explicit (and therefore illegal) agreements and collusion among the few remaining competitors, companies are often able to feel their way to anti-competitive understandings through such mechanisms as price signaling and other unspoken communications.

[17] National Cable and Telecommunications Association, http://www.ncta.com/industry_overview/top50mso.cfm, visited 05/01/02.

regulates cable. For the last several years, the cable industry has lobbied against open access at the federal, state and local levels, and has fought the issue in the courts as well. The FCC has refused to require open access; in fact, it has done quite the opposite, making regulatory decisions that, if they stand, will ensure that cable Internet services are not regulated at all.

Crucial legal battles are underway over the future of cable broadband, and the outcome may hang on a legal technicality: whether cable broadband is classified as an "information service" or a "telecommunications service."

Because the FCC has refused to require cable companies to provide open access to competing ISPs, a number of cities have tried to do so themselves. An attempt by Portland, Oregon to mandate open access was struck down by a federal appeals court on the grounds that cable broadband is a "telecommunications service" that can only be regulated by the federal government.[18] The grounds of the court's ruling have an important implication, however, because "telecommunications services" are subject to common carriage requirements. In other words, although Portland lost the battle, the grounds of the court's opinion would mean victory in the larger war.

The FCC, meanwhile, decided in April 2002 to classify broadband Internet service over cable as an "interstate information service." That technical redefinition would mean that cable broadband could be completely exempt from federal regulation such as interconnection and common carriage requirements, as well as from oversight by local cable franchising authorities.[19]

These legal issues are being fought in court cases that pit public interest advocates (including the ACLU and the Center for Digital Democracy) against the cable companies and the FCC. CTC's report shows that it is possible to set up cable broadband services so that true nondiscriminatory competition is possible; it is vital that such competition be created.

THE GOVERNMENT MUST ACT TO PROTECT THE INTERNET

The cable broadband situation would be bad enough if it were just a case of a market where monopolistic companies are restrained neither by competition nor by the government. But Internet access is not just any business; it involves the sacred role of making available to citizens a forum for speech and self-expression – a forum that is perhaps the most valuable new civic institution to appear in the United States in the past century. An unregulated monopoly is bad for consumers; a monopoly in Internet access is far worse: it is bad for *citizens*, and therefore bad for America.

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[18] *AT&T Corp. v. City of Portland*, No. 99-35609 (9th Circuit, June 22, 2000). Available at http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=9th&navby=case&no=9935609

[19] *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Notice of Proposed Rulemaking, CS Docket No. 02-52; FCC 02-77 (April 17, 2002).

The refusal to create competition in cable broadband appears to be partly the product of a naïve anti-regulatory attitude that scorns any government rules as contrary to the "free market." What this viewpoint leaves out is that competition and regulation are not always at odds. In fact, it is often impossible to have competition *without* regulation; government intervention is needed not only to set ground rules so that competition is kept within socially desirable boundaries (for example by prohibiting murder or cheating on measurements), but to create the very arena in which competition can take place to begin with. Sometimes regulation is needed to provide a level playing field – and sometimes it is needed to create the playing field itself. For example, without government rules establishing and protecting copyrights, intellectual property would not even exist as "property" and therefore there would be no market for it.

And without government rules mandating cable Internet open access, there will be no marketplace for it either, and no competitive restraint on the shrinking number of corporations who are likely to control access to the Internet. Unless, as some have suggested, the government simply abandons the goal of creating competition and treats cable broadband as a regulated monopoly (unlikely in the current political climate), it must take regulatory steps to insure that free access to the Internet is protected by competition.

In fact, the Internet would never have exploded into American life the way it has without regulations issued by the FCC that curbed the power of the telephone companies in ways that the agency is now refusing to do for cable:

- In 1975, the FCC issued a landmark regulation preventing telephone companies from blocking their customers from attaching their own equipment to the phone network. If the agency had decided this issue the other way, regular Americans would not have been able to use computer modems, and the Internet as we know it never could have been created. [20]
- In 1980, the agency set out rules that required telephone companies to offer "data services" through separate affiliates because they would have had both the ability and the incentive to use their control of the telephone network to discriminate against unaffiliated, competing data services.[21]
- In 1983, the FCC issued a regulation preventing telephone companies from charging ISPs by the minute for their use of the local telephone network; if they had allowed such charges, consumers would have to pay per-minute fees for Internet access. That would have slowed the growth of the Internet, as such fees have done in Europe.[22]

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[20] *Proposals for New or Revised Classes of Interstate and Foreign Message Tolls Telephone Service (MTS) and Wide Area Telephone Service (WATS)*, 56 FCC 2d 593 (1975).

[21] *In the Matter of Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, 77 FCC 2d 384, 419 (1980) *(Computer II Final Decision)*.

[22] *MTS and WATS Market Structure*, 97 FCC 2d 682, 711-22 (1983). All three of the previous examples come from Jason Oxman, "The FCC and the Unregulation of the Internet," Office of Plans and Policy Working Paper No. 31, FCC, July 1999.

The hard fact is that the Internet is shifting from the open phone system to the closed cable network. If the government remains passive, it will be transformed in the process into a place where not all thoughts, expressions, publications, and other content is treated equally. The ever-more-exclusive club of cable operators must be counterbalanced by competition, which in this case can only be assured by open-access regulations.

In addition to revealing the full extent of the possibilities for control, the facts laid out by CTC also show that there are no technical barriers to creating true open-access over cable. In its report, CTC outlines a "public interest architecture" that serves as a blueprint for how to transfer the Internet from dialup to cable without losing its free and open nature. The technical steps the firm recommends include making use of routine upgrades to install equipment that will facilitate open access, a long-term program of fiber-optic installation to increase the bandwidth available to all, and the increased standardization of consumer equipment to facilitate competition. CTC's analysis leaves no doubt: nondiscriminatory open access leading to true consumer choice and the survival of the open Internet is completely feasible on the technical level.

Unfortunately, on the political level the prognosis is less clear. The wealthy and powerful cable industry has so far succeeded in blocking action by Congress or the FCC to protect the openness of the Internet. Only if citizens demand action can the precious neutrality and independence of the Internet be preserved.